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CLAIMS

1. ^{A printable} ~~Printable~~ film comprising a substrate and at least a surface layer, said layer covering at least one face of said substrate and consisting essentially of 10 to 98 % ^{by} ~~in~~ weight of a water-dispersible polymer able to provide a smooth-film formed and ^{film} ~~reasonably open~~ surface and 2 to 90 % ^{for printing, by} ~~in~~ weight of an ethylenically unsaturated compound selected from polyfunctional acrylates resulting from the esterification of a polyol with (meth)acrylic acid or polyallyl derivatives, whereby said surface layer ~~does not contain an addition~~ ² ~~polymerization~~ photoinitiator.
2. ^{The printable} ~~Printable~~ film according to claim 1, ^{wherein} ~~characterised in that~~ the substrate is selected from the group consisting of polymer films, polyolefin films, papers, synthetic papers, woven fabrics, nonwoven fabrics, ceramic sheets, metallic fibre sheets, metallized sheets (film), metallic foils, metallic plates, and multilayer composite sheets formed by combination of said materials.
3. ^{The printable} ~~Printable~~ film according to claim 2, ^{wherein} ~~characterised in that~~ the substrate is an oriented polypropylene film.
4. ^{The printable} ~~Printable~~ film according to ^{Claim 1} ~~anyone of claims 1 to 3~~, ^{wherein} ~~characterised in that~~ the water dispersible polymer consists essentially of a homopolymer of (meth)acrylic acid or alkyl (meth)acrylate, the alkyl radical having 1 to 10 carbon ^{atoms} ~~atom~~, or a copolymer of two or more of said monomers or optionally of other vinylic or allylic compounds.
5. ^{The printable} ~~Printable~~ film according to ^{Claim 1} ~~anyone of claims 1 to 3~~, ^{wherein} ~~characterised in that~~ the water dispersible polymer is a urethane or urethane acrylate polymer.
6. ^{The printable} ~~Printable~~ film according to ^{Claim 1} ~~anyone of claims 1 to 5~~, ^{wherein} ~~characterised in that~~ said surface layer ² ~~comprises further~~ a crosslinking agent in an amount of from 1 to 5 % by weight of the water dispersible polymer.
7. ^{The printable} ~~Printable~~ film according to ^{Claim 1} ~~anyone of claims 1 to 6~~, further comprising, between said substrate and said surface layer(s), a primer layer.

the printable

Printable film according to ~~anyone of claims 1 to 7~~, ^{wherein} characterised in that only one face is coated with a surface layer and in that the reverse face of the substrate is covered with a pressure-sensitive adhesive layer.

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A process

9. ~~Process~~ for the manufacture of a printable film according to ~~anyone of claims 1 to 8~~, comprising ~~the step of~~ coating at least one side of the substrate with an aqueous dispersion comprising the water dispersible polymer and the ethylenically unsaturated compound and ~~comprising further the step of~~ drying the coating ~~so obtained~~.

The process

10. ~~Process~~ according to claim 9, ^{wherein} characterised in that the aqueous dispersion comprises further a crosslinking agent.

The process

11. ~~Process~~ according to ~~anyone of claims 9 or 10~~, ^{wherein} characterised in that it comprises a further step of priming of the substrate, before applying said aqueous dispersion.

A process

12. ~~Process~~ for the manufacture of a printed film comprising ~~the steps of~~
- a) coating a substrate with an aqueous dispersion comprising a water dispersible polymer able to provide a smooth film formed and ~~reasonably open~~ ^{film for printing} surface and an ethylenically unsaturated compound selected from polyfunctional acrylates resulting from the esterification of a polyol with (meth)acrylic acid or polyallyl derivatives, whereby said surface layer does not contain an addition polymerisation photoinitiator;
 - b) drying the coating so obtained;
 - c) inking the dried coating with a radiation curable ink; *and*
 - d) curing the ink with UV or EB radiations.

A printed

13. ~~Printed~~ film obtained by inking a printable film according to ~~anyone of claim 1 to 8~~ ^{with} by means of a radiation curable ink and by curing ~~the said ink by~~ ^{with} means of radiations.

A label

14. ~~Label~~ obtained by inking of a printable film according to claim 8, with a radiation curable ink and ~~by curing of~~ said ink with radiations, said film being combined before or after printing with a pressure sensitive adhesive layer and to a release film.

A container

15. ~~Container, in particular bottle, labelled with a label according to claim 14.~~

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E1

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